














How to find the right wick for your candles


Burn Testing




First select a wick from one of the Wedo wick application recommendation sheets - put the wick in your candle and burn-test according to RAL specifications (see box below).





Result	Description	Solution	Additional Information
 A perfect flame	The tip of the wick has curved into the hottest and most oxygen-rich part of the flame. This allows self-trimming.	Use this wick	<p>A candle is a system.</p>  <p>Changing any parameter, may entail the need to change another - e.g. a different candle material may require a different wick.</p>
 The flame smokes	This is an indication that the wick is too large/thick for the candle, or the wick is not positioned correctly causing an „overcurved“ wick stance and larger flame.	Test the next smaller/thinner wick in the same series. Check wick positioning. If a pillar or container, ensure that a wick with stability threads is used (see Wedo wick programme).	
 The candle drips	This is an indication that the wick is too small/thin for the candle, if dripping is not due to the candle material itself (e.g. 100% palm pillar), or unsuitable overlip.	Test the next larger/thicker wick in the same series. Also check viscosity of candle material.	
 The flame becomes smaller and smaller as the candle burns	This is an indication that the wick chemical treatment is too „weak“ for the candle material (e.g. stearic acid or paraffin wax with dark colours and/or heavy fragrances).	Test a wick with a stronger chemical treatment such as STP, NST2, NST7 etc (see illustration on the right)	<p>The „yield“ figure, expressed in metres/kg, is used to describe the size of a wick.</p> <p>The higher the yield, the thinner/smaller the wick.</p> <p>The lower the yield, the thicker/larger the wick.</p> <p>Example: FW 3x10 SU - Yield 1.000 m/kg FW 3x 8 SU - Yield 1.300 m/kg (thinner/smaller) FW 3x12 SU - Yield 830 m/kg (thicker/larger)</p>
 The wick does not self-trim	This is an indication that the wick chemical treatment is too „strong“ for the candle material.	Test a wick with a different chemical treatment.	
 A carbon deposit forms at the tip of the wick	Combustion is incomplete. Often caused by impurities in the candle material which block the wick. The wick may also stand too straight if incorrectly positioned.	Check candle material for impurities and also check the stance of the wick. Is the wick centered and is tension correct?	
 The wick bends too far, or „falls over“.	This is usually due to the wick being overstretched during candle manufacture (e.g. extruder). It can also be an indication of wrong wick selection - e.g. flatwick in a pillar candle.	Check wick tension on the candle machine. Check wick alternatives e.g. wicks with stability threads (see Wedo wick programme)	<p>Wedo has a variety of different wick chemical treatments for different candle materials - see illustration below.</p>  <p>V and HL have proved successful in many different materials and blends</p> <p>Please also note that wicks with treatments for stearic acid also provide good alternatives for paraffin wax candles containing strong colours and/or fragrances.</p>
 The wick bends too far, or „falls over“.	This is usually due to the wick being overstretched during candle manufacture (e.g. extruder). It can also be an indication of wrong wick selection - e.g. flatwick in a pillar candle.	Check wick tension on the candle machine. Check wick alternatives e.g. wicks with stability threads (see Wedo wick programme)	
 A white ash forms at the tip of the wick	The wick does not self-trim. The wick may curve and dip into the burning bowl, „☹“ causing a large flame. The ash is due to impurities in the candle material.	Check - titanium dioxide in material? Recycled using diatomaceous „Fullers“ earth? Silicone migration from moulds?	




RAL All Wedo wicks conform to all known relevant specifications including RAL-GZ 041 (please contact us if further details required). According to RAL, most candles should be burn-tested in cycles.

 Burn time in hours (e.g. 2 hours)  Cooling time in hours (at least 1 hour)

1) Candle weighing up to 40g  Sustained burning down to about 20 mm from the base of the candle

2) Candles above 40g diameter up to 30 mm   

3) Candles with diameter between 31 - 60 mm    

4) Candles with diameter above 60 mm   

(The above cycles can be repeated as necessary, they are examples only - please refer to RAL for further information)
We also recommend testing according to RAL soot testing specifications

Wedo has over 2.000 wicks in its product range.

In general, flatwicks are used in candles up to a diameter of approximately 25 mm (mostly taper or dinner candles). In votives, pillars and jars, wicks reinforced with extra stability threads of cotton or paper, or so-called „Roundwicks“ provide the best results. Certain candle products have their own special wicks. Tealights for example are normally made with „TL“ wicks.

The main candle factors influencing wick selection are:

- Type of candle material (paraffin wax, stearic acid, palm wax, blends etc.)
- Colour and/or fragrance
- Diameter of candle
- Method of candle production
- Free standing or in container

As a starting point for wick selection, please refer to the wick application recommendation sheets available from Wedo or our partners and representatives. We can then provide the appropriate wick samples for you to test.

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